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NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

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basic imagery interpretation report

Xian Airframe Plant Yanliang 172 (S)

STRATEGIC WEAPONS INDUSTRIAL FACILITIES

[redacted] 25X1

CHINA

Top Secret

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SEPTEMBER 1980

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INSTALLATION OR ACTIVITY NAME					COUNTRY
Xian Airframe Plant Yanliang 172					CH
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO.	COMIREX NO.	NIETB NO.
NA	34-38-54N 109-13-36E				25X1

MAP REFERENCE

SAC. USATC, Series 200, Sheet 0385-6, scale 1:200,000

LATEST IMAGERY USED	NEGATION DATE (If required)
	NA 25X1

ABSTRACT

1. (S/D) This report discusses construction observed at Xian Airframe Plant Yanliang 172 from November 1973 through It also reviews BADGER bomber production at the plant and discusses aircraft modification programs and aircraft test activities at the plant's flight test center. The report updates NPIC report and satisfies the basic reporting requirement for this target. 25X1 25X1

2. (S/D) Since November 1973, the floorspace at Xian Airframe Plant has been increased by square meters. At least square meters of additional floorspace remained under construction in August 1980. 25X1 25X1

3. (S/D) This report includes an annotated photograph of the facility with an accompanying table of mensural and chronological data, a chart depicting the annual rate of BADGER production, a line drawing of the Hsian A, and ten photographs of various aircraft and test facilities.

BASIC DESCRIPTION

4. (S/D) Xian Airframe Plant Yanliang 172 (Figure 1) is the largest aircraft production facility in China engaged solely in the production and testing of aircraft. The aircraft production area has been designed to facilitate a smooth flow of materials from the subassembly shops to the final assembly building. The flight test center at the plant is situated for easy access to supporting shops and to Xian/Yanliang Airfield (

5. (S/D) Minimal construction was observed at Xian Airframe Plant from November 1973 through December 1978. No changes or additions were made to the major production buildings. A construction program involving the addition of several small shops, laboratories, and general support/storage buildings was started in early 1979 (Figure 1 and Table 1). Since November 1973, the net increase in floorspace at Xian Airframe Plant Yanliang 172 has been square meters, with at least square meters of floorspace under construction through the end of the reporting period.

Aircraft Production Area

6. (S/D) The most significant construction in the aircraft production area was observed in March 1979. Footings for four medium-sized shop buildings were observed east of the final assembly building. Two of the buildings (items 8 and 12, Figure 1), when complete, will each have a single shop bay with an engineering section on each side. Another building (item 6) will have a single shop bay and a parallel engineering section. The fourth shop building (item 11) will have a three-bay shop section. Footings for a probable engineering section (item 11b) extend the full length of this structure. When complete, the new shop buildings will increase the available aircraft production floorspace by approximately 11,305 square meters.

Flight Test Center

7. (S/D) In March 1979, four laboratory buildings in an early stage of construction were observed at the flight test center. Three of the laboratory buildings (items 16, 18, and 19) had been completed by January 1980, in a relatively short period of time, and the fourth laboratory building (item 20) had been completed by August. Several small, rectangular sheds have been built at the flight test center (Figure 1). Some are possibly used for agricultural products usually seen drying during the summer months in the unused revetments at the east end of the airfield. 25X1

Production

8. (S/D) The intermediate-range BADGER bomber is produced at Xian Airframe Plant 172. The Soviets delivered two BADGERs to the Chinese prior to their ideological differences in the late 1950s. Series production of the Chinese version of the BADGER started in 1968, reaching a high of 24 in 1971. For unknown reasons, the level of production was reduced to three BADGERs in 1973. In 1975, the annual output of BADGERs reached 12, then decreased to ten per year during 1976 and 1977. Beginning in 1978, one BADGER has been produced every other month. The annual production rates of BADGERs at Xian Airframe Plant 172 from 1968 to 1980 are graphically depicted in Figure 2.

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Table 1.
Xian Airframe Plant Yanliang 172, China
Keyed to Figure 1

This table in its entirety is classified SECRET/WNINTEL

Item	Description/Function	Dimensions (m) L	W	Floorspace (sq m)	Date First Observed	Date Observed Complete	Remarks
1	Support bldg				Sep 79	—	Ucon
2	Support bldg				Sep 79	—	Ucon
3	Storage shed				—	May 77	L-shaped
4	Storage sheds (2)				—	May 77	
5	Storage shed				—	May 77	L-shaped
6	Shop bldg						Ucon
a	Shop bay				Mar 79	—	
b	Engr sec				Mar 79	—	
7	Storage bldg				—	May 77	
8	Shop bldg						Ucon
a	Shop bay				Mar 79	—	
b	Engr sec				Mar 79	—	
c	Engr sec				Mar 79	—	
9	Support bldg				Jul 79	Jan 80	
10	Prob support bldg				Jul 79	—	Ucon
11	Shop bldg						Ucon
a	Shop sec				Mar 79	—	3 bays
b	Prob engr sec				Mar 79	—	
12	Shop bldg						Ucon
a	Shop bay				Mar 79	—	
b	Engr sec				Mar 79	—	
c	Engr sec				Mar 79	—	
13	Flight line support bldg				Aug 79	—	Ucon
14	Storage bldg				Jan 79	Jan 80	
15	Storage bldg				Sep 79	Jan 80	
16	Laboratory bldg				Mar 79	Jan 80	
17	Storage bldg				—	Jan 79	
18	Laboratory bldg				Mar 79	Jan 80	
19	Laboratory bldg				Mar 79	Jan 80	
20	Laboratory bldg				Mar 79	Aug 80	
21	Support bldg addition				Jul 79	May 80	
22	Bldg foundation				Sep 79	—	
23	Poss support bldg				Sep 79	—	Ucon

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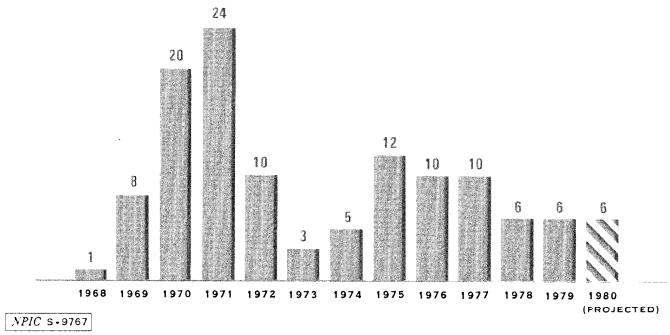

FIGURE 2. BADGER PRODUCTION AT XIAN AIRFRAME PLANT 172

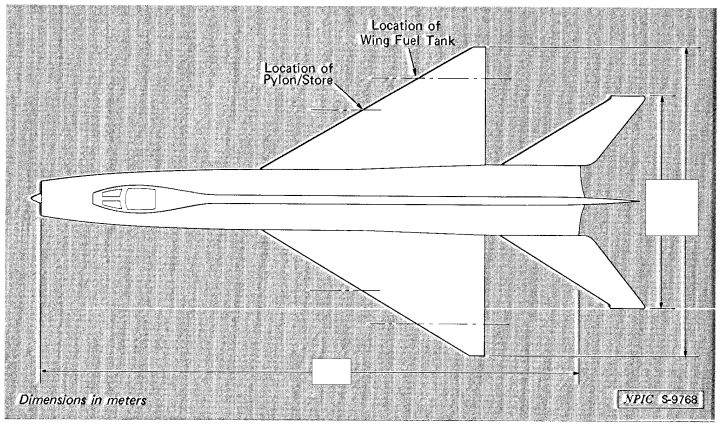

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FIGURE 3. LINE DRAWING OF HSIAN A

Aircraft Testing

9. (S/D) The Xian Airframe Plant flight test center is the primary facility for flight and systems performance testing of all major aircraft in the Chinese air forces. At least one of most types of aircraft in the Chinese inventory is usually parked adjacent to the flight test center. These aircraft may be used to simulate conditions or isolate problems encountered on aircraft at operational airfields.

10. (S/D) The most significant flight test program at the Xian flight test center has been in the acceptance testing of the indigenously designed Hsian A. The Hsian A is similar in size and appearance to the Soviet Mikoyan-designed, delta-wing FLIPPER and is assessed to be a single-seat, twin-jet, high-performance interceptor (Figures 3 and 4).

[redacted]

12. (S/D) On several occasions, a Hsian A with external fuel tanks mounted outboard of the wing fences and pylons/stores positioned inboard of the fences has been observed at the Xian flight test center.

Aircraft Modification

13. (S/D) Several aircraft at the Xian flight test center, including a BADGER, a BEAGLE, several BULLs, and possibly a CUB, have been modified from their standard configurations.

14. (S/D) On [redacted] a BADGER with a turbojet/turbofan engine pod under each wing was observed. The engine pods were mounted on a forward-inclined pylon approximately [redacted] from the fuselage. The pods extend approximately [redacted] beyond the leading edge of the wing and are approximately [redacted] in diameter (Figure 5). Burn marks have been observed on the ground behind both engines, and access panels on the engines have been observed open. The BADGER was in the same position until May 1980. On imagery of [redacted] the aircraft was observed on the run-up apron at the south end of the runway. This BADGER was probably being utilized as a test bed for engine evaluation.

15. (S/D) A BEAGLE, modified for an unidentifiable mission, was first observed on the parking ramp adjacent to the flight test center on [redacted] The aircraft had an elongated, [redacted] blister-like fairing atop the fuselage, directly aft of the cockpit, and a bulbous aft fuselage extension [redacted] long (Figure 6). The extension was [redacted] in diameter at its juncture with the main fuselage and [redacted] in diameter near its terminal point. The aircraft is usually parked on the main ramp at the airfield. This BEAGLE or one configured similarly has occasionally been seen at the Shuangchengzi Airfield [redacted]

16. (S/D) The observation of two BULLs with conventional reciprocating engines outside the final assembly hall on imagery of [redacted] (Figure 7) suggests that Xian Airframe Plant may have been the facility utilized in retrofitting BULL aircraft with turboprop engines. During the mid-1970s, the Chinese upgraded the underpowered BULL with the more powerful turboprop engines. The Chinese received 13 BULLs from the Soviets in the late 1950s. The aircraft are usually based at Wugong Airfield [redacted]

17. (TSR) On [redacted] a BADGER was parked on the ramp at the entrance to the hangar at the flight test center, and a naval surface-to-surface missile (CSSN-1) shipping container was near the right wing (Figure 8). There were no indications of pylons on the aircraft; however, it is possible that the Chinese may have been experimenting with a CSSN-1 missile and the BADGER.

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18. (TSR) On [redacted] a CUB with canvas covering the cockpit and nose section was parked in front of a revetment at the airfield (Figure 9). The overall fuselage was [redacted] longer than that of the standard CUB. This discrepancy in the length of the fuselage forward of the leading edge of the wing may be due to the placement of the canvas over the nose section.

Test Facilities

19. (S/D) The Xian flight test center is equipped with several outdoor test facilities for the evaluation of aircraft structural strength and systems performance capabilities. These include a drop test rig, a moment-of-inertia test rig, an ejection seat test rig, and an aircraft test apron.

20. (S/D) The drop test rig (Figure 10), which is probably used in testing fuselage and landing gear structural stress limitations, has been in place since 1965. A FARMER aircraft was observed under the rig on several occasions from early 1966 to January 1970. 25X1

21. (S/D) The moment-of-inertia test rig (Figure 11), sometimes called a tether rig, was completed in August 1972. A FARMER has been observed under the rig on all interpretable coverage acquired since early 1977. 25X1

22. (S/D) The ejection seat test rig and its accompanying support building (Figure 12) were present when the flight test center was first observed in September 1964. A parachute test tower is also in the area.

23. (S/D) The aircraft test apron was completed in February 1967 and consists of a concrete apron and a monitor/test-support building (Figure 13). The apron contains a pit, an inclined ramp on either side of the pit, and an exhaust deflector. This facility is used in conjuction with mobile wind or moisture generators and may be utilized to simulate various atmospheric conditions on aircraft and aircraft engines.

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REFERENCES

IMAGERY

(S/D) All applicable satellite imagery acquired from [redacted] was used in the preparation of this report. 25X1

MAPS OR CHARTS

SAC. US Air Target Chart, Series 200, Sheet 0385-6, scale 1:200,000 (UNCLASSIFIED)

DOCUMENTS

1. NPIC, [redacted] IAR-0090/79, *Hsian A Development 1970–1979 (TSR)*, Nov 79 (TOP SECRET [redacted] 25X1
[redacted] 25X1

*Extracted material is classified TOP SECRET [redacted] 25X1

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(S/D) Comments and queries regarding this report are welcome. They may be directed to [redacted] Asian Forces Division, Imagery Exploitation Group, NPIC, [redacted] 25X1 25X1

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